

Applic. No.: 10/680,379
Amdt. Dated November 21, 2006
Reply to Office action of August 22, 2006

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REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-24 remain in the application. Claims 1 and 9 have been amended. Claims 16-24 have been withdrawn.

In item 3 on pages 2-3 of the above-mentioned Office action, claims 1-15 have been rejected as being anticipated by Smayling (US 5,942,374) under 35 U.S.C. § 102(b).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references. However, the language of claims 1 and 9 has been modified in an effort to even more clearly define the invention of the instant application. Support for the changes is found on, for example, page 27, lines 15-17 of the specification.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

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Claim 1 calls for, inter alia:

removing unbounded doping substance from the organic compound after the exposure; and

restoring original electrical conductivity in unexposed regions.

Claim 9 calls for, inter alia:

after the exposure, removing unbounded doping substance from the organic semiconductor to irreversibly fix, in regions of the organic semiconductor adjoining the source contact and the drain contact, the doping substance in the organic semiconductor and to obtain contact regions adjoining the source contact and the drain contact, the contact regions having increased electrical conductivity; and

restoring original electrical conductivity in unexposed regions.

The present invention concerns a simple and inexpensive method for a selective and positionally stable doping of the source and drain contacts in organic field-effect transistors via introduction of suitable doping substances into the organic semiconductor. In the following step, the doping is locally fixed while retaining a lower electrical conductivity in the channel region.

As discussed in the previous response, Applicants believe that Smayling does not disclose that the unbounded doping substance is removed from the organic compound after the exposure. The exact positional doping is achieved by removing the unbounded dopant.

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The Examiner has stated in the first paragraph on page 4 of the final Office action that Smayling discloses that after the exposure to the dopant gas, the mask oxide layer is removed.

However, it is noted that removing a mask is different from removing the unbounded dopant. The present invention not only removes the mask, but also the unbounded dopant in order to restore the original electrical conductivity in the channel region.

The language of claims 1 and 9 has been modified to more clearly recite that the unbounded dopant is removed, thus restoring the original electrical conductivity in the unexposed regions.

The doped regions in the present invention have an increased electrical conductivity while a lower electrical conductivity of the organic semiconductor is maintained in the channel region. This has not been demonstrated by Smayling.

Clearly, Smayling does not show removing unbounded doping substance from the organic compound after the exposure and

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restoring original electrical conductivity in unexposed
regions, as recited in claims 1 and 9 of the instant
application.

Claims 1 and 9 are, therefore, believed to be patentable over
the art and since all of the dependent claims are ultimately
dependent on claims 1 or 9, they are believed to be patentable
as well.

In view of the foregoing, reconsideration and allowance of
claims 1-15 are solicited.

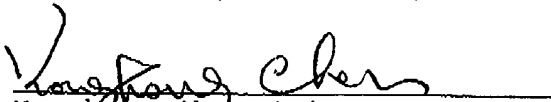
In the event the Examiner should still find any of the claims
to be unpatentable, counsel would appreciate a telephone call
so that, if possible, patentable language can be worked out.
In the alternative, the entry of the amendment is requested as
it is believed to place the application in better condition
for appeal, without requiring extension of the field of
search.

If an extension of time for this paper is required, petition
for extension is herewith made. Please charge any fees which
might be due with respect to 37 CFR Sections 1.16 and 1.17 to

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the Deposit Account of Lerner Greenberg Stemmer LLP, No. 12-
1099.

Respectfully submitted,


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November 21, 2006

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